

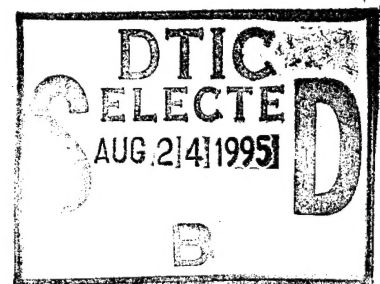
NAVAL WAR COLLEGE
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A CASE STUDY OF
AIRPOWER AND THE PROTECTION OF SEALIFT

by

David A. DellaVolpe

Lieutenant Colonel, USAF



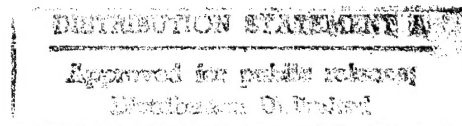
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The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: David A. DellaVolpe

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Abstract

In future conflicts, the US may not have a permissive environment for its sealift effort and must plan to protect its shipping assets if it is to conduct successful operations. A significant capability to provide this protection is the use of land based airpower. By examining an historical example from World War II, several lessons can be drawn that are applicable for today. The efforts of the *Luftwaffe* protecting Axis shipping in the Mediterranean show how airpower can be both used properly and improperly in this role.

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Introduction

The US military's resounding victory over the Iraqi forces in the Persian Gulf War was due in a large way to the massive sealift effort that brought the required resources into the theater. As the US built up its combat power over several months, the supplies arrived into the ports in a permissive environment. Fortunately for the US, Iraq could not challenge this deployment and it continued unabated.¹ Yet, in a future conflict this permissive environment may not be available, and the US must plan to protect its shipping if it is to conduct successful operations.

A significant capability to provide this protection is the use of land based airpower. If sealift is delivering large quantities of supplies into the theater, it can be assumed that airfields are available. In this case, US Air Force assets can provide a mix of capabilities that can complement naval assets and bring a synergistic effect to protection of shipping.² The specifics on how the assets will be used can vary between theaters; however, it is important that the theater commander includes this important area in his plan. Through his joint force air component commander (JFACC), the theater commander can best employ these land based air assets as operational fires or in the role of operational protection of the sealift.

A significant, historical case exists which will allow examination of how land based air can be both properly employed in

¹ Norman Friedman, *Desert Victory: The War For Kuwait* (Annapolis, MD: Naval Institute Press, 1991), p. 239.

² Colonel Dennis Drew, "The Airpower Imperative: Hard Truths for and Uncertain World," *Fundamentals of Force Planning Vol. II, Defense Planning Cases* (Newport, RI: Naval War College Press, 1991), p. 379.

this role of protection of sealift and then misapplied in the same operation. This occurred during World War II when the *Luftwaffe* was tasked in 1942 to protect the Axis shipping lanes from Europe across the Mediterranean into North Africa. There are several significant aspects of this major operation that can provide lessons that are still valuable today for the operational planner and commander.

Strategic Setting

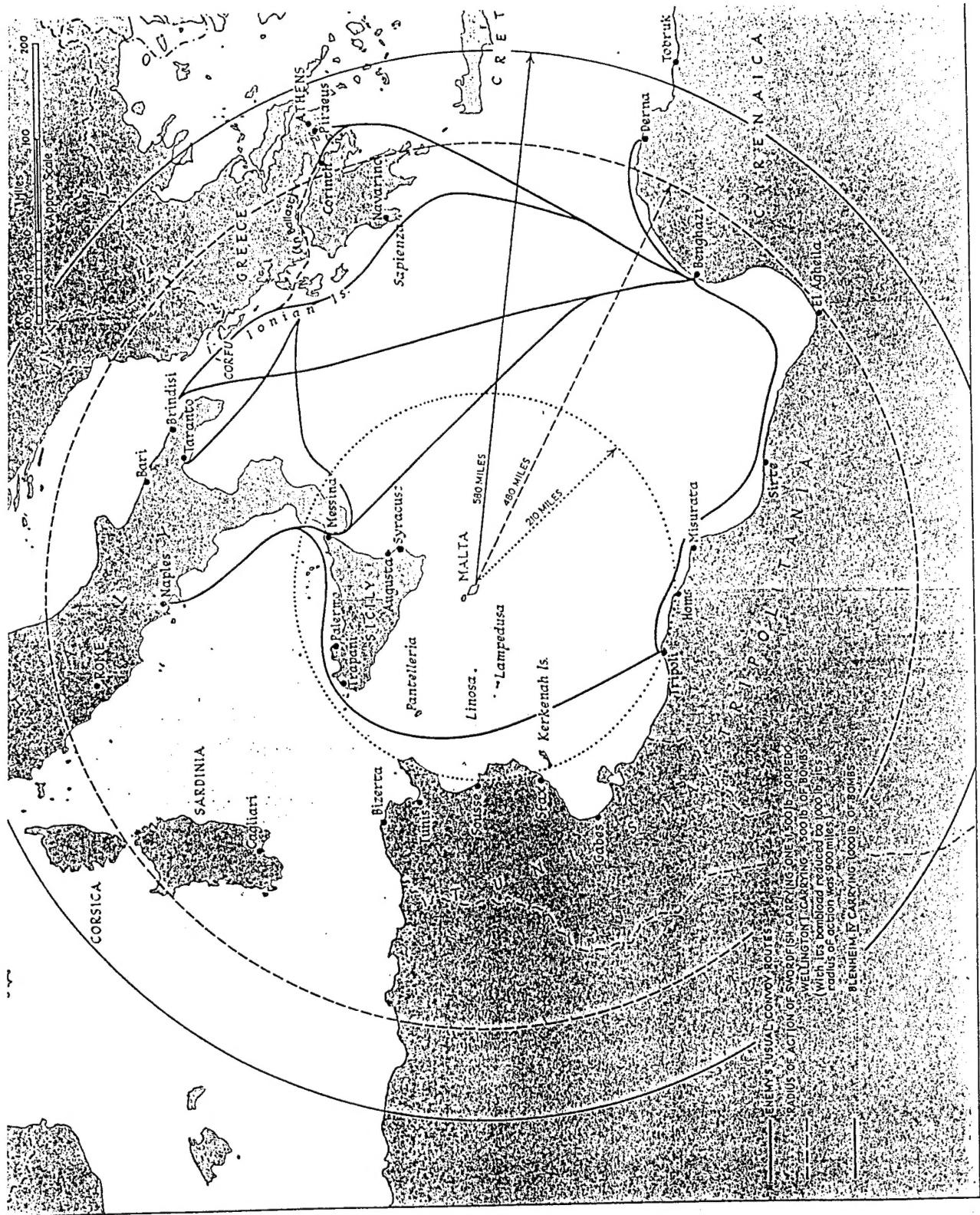
The story begins on 10 June 1940 when Mussolini recognized that Germany was about to win the Battle of France, so he quickly declared war on Britain and France. This brought Italy into the war on the Axis side. Since he had always claimed the Mediterranean to be Italy's "*Mare Nostrum*," Mussolini should have taken immediate steps to overcome British forces on the island of Malta before they could be reinforced.³ However, the Italian forces really were not ready to undertake any significant military operations at this time, as they possessed old equipment, maintained faulty doctrine, and at times could not even account for their aircraft.⁴

Sitting in between Italy and North Africa, Malta occupied a strategic location to influence shipping in the Mediterranean. Under British control, it was used as a sea and air base that was directly in line with the critical sea lines of communication (SLOCs) from Europe to North Africa (Fig 1).⁵ Italy soon ran into problems with

³ Walter Boyne, *Clash of Wings* (New York: Simon & Schuster, 1994), p. 167.

⁴ Williamson Murray, *Strategy For Defeat: The Luftwaffe 1933-1945* (Maxwell AFB, AL: Air University Press, 1983), p. 72.

⁵ S. O. Playfair, *History of the Second World War, Vol. II, Mediterranean and the Middle East* (London: Her Majesty's Stationery Office, 1956), p. 279.



Axis SLOCs in the Mediterranean (Fig 1)

the British Army in North Africa and the Royal Air Force (RAF) on Malta. Thus, when Hitler ordered Rommel to North Africa in February 1941 to help Italy, he also ordered *Fliegerkorps X* to Sicily to deal with the RAF threat on Malta.

During February and March 1941, when Rommel and the *Deutsch Afrika Korps* were moving to North Africa, the *Luftwaffe's* protection of this deployment enabled it to proceed with less than 3 percent losses enroute.⁶ However, as the months passed, Hitler became more and more focused on the upcoming invasion of Russia and started moving forces out of Italy in support of it. This had a direct impact on Rommel's ability to prosecute the war, as the British were able to reinforce Malta and successfully cut Axis supplies to North Africa. This situation continued to worsen until November 1941 when the British sank more than 77 percent of the Axis shipping that month.⁷

At this point (the focus of this study), Hitler appointed *Generalfeldmarshal* Kesselring as Commander in Chief, South to orchestrate the protection of shipping to North Africa. Kesselring built his plan around *Luftflotte II* that was also transferred to Sicily from the Eastern Front. By May 1942, Malta was again reduced as a base of air and naval operations.⁸ With his supply route secure, Rommel returned to the offensive in North Africa.

⁶ Charles A. Jellison, *Besieged: The World War II Ordeal of Malta, 1940-1942* (Hanover, NH: University Press of New England, 1984), p. 102.

⁷ Jellison, p. 209.

⁸ Jellison, p. 170.

At this time, Kesselring argued that Malta should be invaded to ensure its submission, while Rommel wanted to move quickly into Egypt. With the backing of Hitler, Rommel moved into Egypt. This required a large percentage of *Luftwaffe* assets to move to North Africa and ignore the gains made against Malta. Unfortunately for the Germans, the move into Egypt was too soon, supply lines were again cut, and the Germans suffered a defeat at El Alamein from which they were not able to recover.⁹

Analysis of Luftwaffe Operations

While the *Luftwaffe* was successful when they specifically focused on protecting Axis shipping, Germany ultimately failed to keep its SLOCs open. It is worthwhile to examine some of the reasons from an operational art perspective to see why the Germans were initially successful with their efforts but then later, as the situation evolved, they failed.

Theater Elements

The Mediterranean was a theater of operations within the European Theater of War. For Germany, this was always a secondary theater, as their primary focus was on the Eastern Front where they looked to achieve their strategic objective of *lebensraum*, or living space. Thus, the Germans viewed the Mediterranean as an area of

⁹ Albert Kesselring, *Kesselring, A Soldier's Record* (New York: William Morrow and Co., 1954), p. 151.

Italian influence, maybe one of peripheral importance, but not as an area of prime concern until it was too late.¹⁰

By the time Kesselring arrived with *Luftflotte II*, the theater was mature with sufficient bases and ports from which to operate. This allowed him to build forces and develop combat operations into a coordinated plan rather than to have to build bases for support. Italy and Sicily provided a series of airfields that served as the base of operations for the Germans to operate from exterior positions. This was different for the Germans who were used to operating on interior lines on the continent where they shifted forces at will between theaters.¹¹ Now they were faced with moving limited resources over exterior lines--a more challenging task. In the Mediterranean, it was Malta that occupied the central position versus the shipping lanes. Using the numerous airfields, the *Luftwaffe* had the advantage of multiple lines of operation (LOOs) into Malta. Yet, since these all had to converge on the small island, there was no operational advantage to these multiple LOOs other than the use of multiple bases for launch and recovery.

Theater Functional Areas

An analysis of the theater functional areas for the Germans will highlight several areas where they operationally excelled and some where they could have improved. However, the main reason they failed in the theater was lack of coordination of the operational mission

¹⁰ *World War II German Military Studies, Vol. 14, Part VI, The Mediterranean Theater* (New York & London: Garland Publishers Inc., 1979), p. 3.

¹¹ Asher Lee, *The German Air Force* (New York and London: Harper & Brothers Publishers, 1946), p. 97.

with their strategic goals. Further complicating this was the involvement of Hitler who made *ad hoc* changes to the direction of the operation against the suggestion of the theater commander.¹²

After fighting in North Africa for a year, Hitler realized the importance of the supply lines to his forces. He personally pulled Kesselring from the Eastern Front and made him Commander in Chief, Mediterranean. Yet, the command structure Hitler established was flawed, as he did not place Rommel under Kesselring's command. This ultimately led to conflicts in determining the priority of major operations that should take place. Still, not all command decisions were faulty, and Kesselring was able to reestablish German air superiority and sea control solely through the use of land based air. As such, he ensured that supplies moved to North Africa.

Kesselring understood the importance of Malta as shown by his initial objectives: put the three airfields on Malta out of action, and destroy harbor installations as well as any ships in the harbors.¹³ What is more important, he recognized the need to build up his force before sending it into action so that he could maximize and not piecemeal its employment. With this concerted effort, Kesselring brought shipping losses from the 77 percent in November 1941 to less than 2 percent in April 1942.¹⁴ This is what enabled Rommel to get the supplies and reinforcements that he needed to regain the initiative and return to the offensive.

¹² *Rise and Fall of the German Air Force* (New York: St. Martin's Press, 1983), p. 143.

¹³ Karl Bartz, *Swastika in the Air: The Struggle and Defeat of the German Air Force 1939-1945* (London: William Kimber & Co., 1956), p. 122.

¹⁴ Jellison, p. 173.

Kesselring developed an excellent plan that concentrated the use of land based air as operational fires for the protection of shipping. These missions were planned by an operational commander and had the operational objectives of neutralizing the RAF and securing Axis shipping lanes to North Africa. Since the entire effort was planned and conducted in a region geographically separated from the land operations in North Africa and at a time before the commencement of the attack, the use of land based air had operational impact on this campaign. This major air operation took place over the Mediterranean Sea in five weeks from 2 April - 10 May 1942,¹⁵ secured the logistics, and allowed Rommel to move to a new phase.

The efforts of *Luftflotte II* had tactical applications as well. With minimal help from the Italian Navy, Kesselring had to employ the *Luftwaffe* in direct escort of the convoys. While this was a tactical employment of airpower, it had the effect of operational protection of theater logistics.

Turning Victory into Defeat

In late May 1942, Germany was again getting its supplies to North Africa, they had neutralized the RAF, Rommel had recaptured Tobruk, and everyone agreed that the invasion of Malta should be the next step.¹⁶ So, how did this plan fall apart? First, Rommel argued that he should immediately invade Egypt after taking Tobruk and invading Malta was not necessary. Second, Kesselring argued that

¹⁵ Harold Faber, ed., *Luftwaffe: A History* (New York: New York Times Books, 1977), p. 209.

¹⁶ Faber, p. 210.

Rommel should consolidate his position and fix equipment, especially the badly broken air assets, while he secured Malta. Hitler agreed with Rommel. Thus, when Germany moved to Egypt, they passed their culminating point due to the ever thinning of their combat forces and the ever lengthening of their supply lines that the British were able to exploit. An examination of the four questions used in planning major operations will further highlight why this was the wrong decision.

Planning Major Operations

First, what were the military conditions required to meet the strategic-operational objectives? The German leadership changed its objectives throughout the years from support to the Italians, to elimination of the British threat in North Africa and Mediterranean, to opening up a strategic approach into the Middle East and linkage with German forces in southern Russia. These changing objectives came on an *ad hoc* basis that were tied to battlefield successes. Since Germany never really had an overall plan for the Mediterranean, they suffered from this lack of direction.

Second, how must military operations be phased either simultaneously or sequentially to reach the military conditions? By the time Kesselring was assigned, Germany had wasted a year's efforts in the Mediterranean changing the direction of its efforts. Yet, he outlined a phased plan to secure the supply routes, capture Malta, and then support Rommel's push into Egypt. However, he did not have the final say for the theater, and Hitler overruled him and again changed the plan.

Third, what resources must be allocated for this operation? The Mediterranean was a theater of secondary importance for the Germans with the Eastern Front and the air war against England receiving the highest priorities. Also, as a predominantly maritime theater Germany was at a disadvantage with relatively few naval forces to commit to the region. Yet, they properly allocated a significant air force to meet the threat when they sent *Luftflotte II*. While these forces were not numerous enough for simultaneous phases of convoy protection and support to Rommel's land operations, they were strong enough to meet the sequential phases outlined by Kesselring.

Fourth, what were the risks as outlined by this operation? Hitler's decision not to invade Malta was partly influenced by Rommel who wanted to invade Egypt, but he was also influenced by the high cost of invading Crete the previous year. During that invasion, the elite *Fliegerkorps XI* force of 22,000 suffered over 6,000 casualties. They also lost 271 JU-52 transports.¹⁷ However, Hitler did not consider that the *Luftwaffe* had pummeled Malta with over 11,000 sorties during April and May. There was no aerial bombardment of this scale that preceded the invasion of Crete. So, in retrospect, the situation on Malta was different than Crete and the invasion of Malta would have been an acceptable risk.

Airpower Tenets

The Germans failed in two other areas as well. While they achieved their objectives of neutralizing Malta and securing their supply lines, they failed to consolidate on these objectives before

¹⁷ Jellison, p. 121.

moving to the next phase. Given the scarce resources available, this would have been a better use of their forces. As a part of this, they also violated two of the tenets of employing airpower-- persistence and synergy. As outlined in Air Force Manual 1-1, airpower "should be applied persistently. Destroyed targets may be rebuilt by resourceful enemies. Air commanders should plan for restrikes against important targets."¹⁸ For two years the British had been rebuilding and reinforcing Malta, and there was no reason to believe that they would not do this again if given the chance.

The other tenet that they did not employ was synergy. Air operations are usually most effective when integrated with other land and naval forces. Unfortunately, the Italian Navy did not prove sufficiently strong and German naval assets were not available other than a few submarines. However, they could have used airborne forces in concert with overwhelming airpower to secure the island.

Lessons Learned

Too often, only successful military campaigns are studied to find lessons learned on how to plan and conduct future military operations. Yet, it is useful to examine a significant military operation that had a good chance for success but failed in the outcome. The parallels of *Luftwaffe* operations in the Mediterranean with the use of land based air assets for the protection of shipping in a future contingency are significant. Several of the factors that

¹⁸ *Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force* (Washington DC: Air Force Printing Office, 1992), p. 8.

they considered or ignored are the same ones facing a theater CINC today. These lessons fall into four categories: policy and strategy, planning, organization, and integration of airpower.

Policy and Strategy

National command authorities must be clear when stating objectives so that military forces can translate them into military operations. It is then the commander's responsibility to ensure his campaign stays targeted on the objective. A major temptation is to translate partial success on the battlefield into bigger or different objectives without a thorough assessment or an equal adjustment in forces or strategy. This problem hurt the Germans when they neutralized Malta and captured Tobruk in a relatively quick manner. They then changed their plan without reassessing the resources or considering the implications on their strategy. Thus, it becomes imperative to continuously review objectives, strategy, and forces throughout the campaign to ensure they remain coordinated.

Planning Considerations

The development of a campaign plan or detailed operation order is critical to coordinating today's joint forces. Yet, that just sets the framework for the execution of the forces. At the operational level, the theater commander should develop a formal planning process that will determine how he will achieve victory. This four step process should and must start with a determination of the enemy's center of gravity. For instance, the operational center of gravity in the Mediterranean was the British Army in North Africa. The remaining steps, while important, cannot even be considered until

the center of gravity is determined. Otherwise, all efforts will be accomplished through a random strategy that is both wasteful of time and resources.

The second step involves identifying the physical objectives. Achieving these would result in a drastic change in the theater.¹⁹ In the case study, one of the physical objectives for the Germans should have been the capture of Malta. This would have drastically shifted the balance of power for sea control to the Germans. The third step of the planning process is to identify the decisive points that would lead to the physical objectives. In the case study, these would have been the major ports and airfields on Malta. Only by capturing these would Germany reach its physical objective and take away the British capability to threaten the Axis SLOCs.

Finally, with these three parts identified, lines of operation can be drawn from the base of operations through the decisive points to the physical objectives. When using maritime or air forces, this is the best method for determining how to reach operational objectives and ultimately the enemy center of gravity.²⁰ If the Germans had planned this way, they would have seen the need for their lines of operation to go through and not around Malta into North Africa. This would have also highlighted the need to conduct sequentially phased operations that aimed at the enemy's center of gravity rather than executing a random strategy. This formalized

¹⁹ Milan Vego, "Maritime Theater and its Elements," *Operational Art: A Book of Readings* (Newport, RI: Naval War College Publication, 1995), p. 7.

²⁰ Milan Vego, "Major Naval Operations," Lecture, US Naval War College, Newport, RI: 4 May 1995.

planning process will keep the commander's efforts focused and help him assess when he is beginning to deviate from the plan.

Organization

One of the principles of warfare is unity of command. Yet, achieving unity of command with a complex multi-service, multinational force may not be easy. Therefore, unity of effort should be the minimum acceptable level to ensure forces are integrated properly. When integrating forces from different services or countries, there may exist conflicts with doctrine or even cultures. Thus, these problems must be addressed and rectified early.

In the case, Kesselring was given powers similar to a theater commander. Through his primary staff, *Luftflotte II*, Kesselring had direct control over *Fliegerkorps X*, *Fliegerkorps II*, and Air Officer Commanding, Africa as well as close coordination with the Italian Air Force.²¹ Yet, Rommel remained outside of Kesselring's chain of command. This led to differences on how the operations were to be conducted. This lack of unity of effort directly contributed to the downfall of the Germans in the theater. Contrast this with the defense of Italy in 1943 where Kesselring had total control of ground and air forces. Here he faced a larger, more challenging force of British and Americans. Yet, he was able to mount a defense that held throughout all of 1943 and 1944, longer than anyone had predicted.

Airpower

A critical facet of organizational structure is how airpower is controlled. This tenet of airpower is centralized control.

²¹ Kesselring, p. 131.

Centralizing command and control is key to the fusing of the many capabilities that airpower brings to the battlefield.²² Only in this manner can a commander make full use of this operational-level asset. To make this happen most effectively, the theater commander needs a JFACC. This is the person, using the theater commander's intent, who can best use the airpower, focus the assets where they best meet the commander's objectives, and adjust them as the situation dictates.

In the case, the *Luftwaffe* had several important tasks: neutralize Malta, protect Axis convoys, attack allied convoys, protect the Italian Navy when it ventured out of port, and support the ground campaign in North Africa. Using centralized control for the first six months, Kesselring employed his airpower where and when he could best use it. Only after it was taken away from his priorities did the airpower fail to achieve the objectives.

Conclusion

Airpower can make a difference in protecting sealift assets during deployment, buildup, and execution of a major operation. During Desert Storm, resupply and logistics were untouched. Yet, if a future threat, such as Iran or North Korea, has submarines, naval, or air assets, it could threaten US sealift. While neither has the capability to threaten the US on a global basis, they certainly could attempt this once the resources arrived in theater.

Here land based airpower can play a critical role in protection of shipping. They can be used as operational fires to provide

²² AFM 1-1, p. 16.

overall support of the SLOCs and sealift, as Kesselring did with the *Luftwaffe* during the first six months of 1942. Coordinated with naval assets operating in a direct protection role, the land based air can also provide surveillance, detection, escort, and interdiction within the theater. The JFACC is the person who has the command, control, and communications assets to coordinate and integrate this mission into the overall theater air plan. The key is to plan for this mission ahead of time and not just address it after a problem occurs. The use of land based airpower, properly integrated into the campaign plan and controlled by JFACC, will provide a significant capability for this.

BIBLIOGRAPHY

Books

- Bartz, Karl. *Swastika in the Air: The Struggle and Defeat of the German Air Force 1939-1945*. London: William Kimber & Co., 1956.
- Boyne, Walter J. *Clash of Wings*. New York: Simon and Schuster, 1994.
- Dupuy, R. Ernest, and Trevor N. Dupuy. *The Encyclopedia of Military History, from 3500 B.C. to the present*. 2nd revised edition. New York: Harper & Row, Publishers, 1986.
- Faber, Harold, ed. *Luftwaffe: A History*. New York: New York Times Book, 1977.
- Friedman, Norman. *Desert Victory: The War for Kuwait*. Annapolis, MD: Naval Institute Press, 1991.
- Galland, Adolf. *The First and the Last, The German Fighter Force in World War II*. Mesa, AZ: Champlin Museum Press, 1986.
- Jellison, Charles A. *Besieged: The World War II Ordeal of Malta, 1940-1942*. Hanover, NH: University Press of New England, 1984.
- Kesselring, Albert. *Kesselring: A Soldier's Report*. New York: William Morrow & Company, 1954.
- Killen, John. *Luftwaffe: A History*. London: Frederick Muller Ltd., 1967.
- Lee, Asher. *The German Air Force*. New York and London: Harper & Brothers Publishers, 1946.
- Murray, Williamson. *Strategy for Defeat: The Luftwaffe 1933-1945*. Maxwell Air Force Base, AL: Air University Press, 1983.
- Playfair, S.O. *History of the Second World War, Vol. II, Mediterranean and Middle East*. London: Her Majesty's Stationery Office, 1956.
- Rise and Fall of the German Air Force*. New York: St. Martin's Press, 1983.
- World War II German Military Studies Vol. 14, Part VI, The Mediterranean Theater*. New York & London: Garland Publishers Inc., 1979.

US Government Document

Department of the Air Force. *Air Force Manual 1-1, Volume 1, Basic Aerospace Doctrine of the United States Air Force*. Washington DC: Air Force Printing Office, 1992.

Articles

Drew, Dennis. "The Airpower Imperative: Hard Truths for an Uncertain World," *Fundamentals of Force Planning, Vol. II. Defense Planning Cases*. Newport, RI: Naval War College Press, 1991.

Record, Jeffrey. "Why the Air War Worked," *Fundamentals of Force Planning, Vol. II. Defense Planning Cases*. Newport, RI: Naval War College Press, 1991.

Vego, Milan. "Maritime Theater and its Elements," in *Operational Art: A Book of Readings*, ed. Milan Vego. Newport, RI: Naval War College, 1995.

Lecture

Vego, Milan. "Major Naval Operations." Lecture. US Naval War College, Newport, RI: 4 May 1995.